

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Robert H. Mimplitch, III et al. Art Unit : 3679
Serial No. : 10/008,766 Examiner : Michael P. Ferguson
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Title : APPARATUS AND METHOD FOR ADAPTING TWO-POST RACK SYSTEMS
TO SUPPORT FOUR-POST RACK MOUNTED EQUIPMENT

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
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BRIEF ON APPEAL

Appellant files this brief on appeal under 37 CFR 41.37, thereby perfecting the notice of appeal which was originally filed on April 12, 2005, after the Office Action mailed January 12, 2005.

(1) Real Party in Interest

Innovation First, Inc., the assignee of the present Application, is the real party in interest.

(2) Related Appeals and Interferences

There are no related appeals or interferences.

(3) Status of Claims

Claims 1-46 and 48-79 are pending in the application, of which claims 1, 31, 46, 51, 52, 60, 67, 68, 72, and 73 are independent. Claims 13, 14, 19, 41, 60-66, and 73-79 have been withdrawn from consideration, and claim 47 has been canceled. Claims 1-12, 15-18, 22-28, 30-40, 44-46, 48-59, and 67-72 stand rejected, and claims 20, 21, 29, 42, and 43 are objected to. All

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rejected, non-withdrawn claims (i.e., claims 1-12, 15-18, 22-28, 30-40, 44-46, 48-59, and 67-72) are being appealed.

(4) Status of Amendments

No amendments have been filed subsequent to the rejection that is the basis for this appeal.

(5) Summary of Claimed Subject Matter

Independent claim 1 is directed to a coupling member 10 for converting a two-post equipment rack 200 and 801. See, e.g., p. 5, lines 11-21; p. 6, lines 10-11. The coupling member 10 includes a vertical support member 20 having a first lateral end 30, a second lateral end 40, a first longitudinal end 50, and a second longitudinal end 60. See p. 6, lines 12-13. An equipment attachment means is coupled to the first lateral end 30. See p. 9, lines 22-23. The equipment attachment means defines a vertical supporting point for a load, see p. 9, line 23, to p. 10, line 1, and is further adapted to secure to a load. See p. 10, lines 7-10. The coupling member 10 also includes means for securing the coupling member 10 to the two-post equipment rack 200. See p. 10, lines 20-22. The equipment attachment means and the means for securing are in means plus function format pursuant to 35 U.S.C. § 112, sixth paragraph. The equipment attachment flange 110, 110A, 110E (see, e.g., p. 9, line 22) corresponds to the equipment attachment means. The rack attachment flange 130, 130A (see, e.g., p. 10, lines 20-22) corresponds to the means for securing the coupling member 10 to the two-post equipment rack 200.

Independent claim 31 is directed to a modified two-post rack 200 and 801 that includes a first vertical post 160A having a first side and a second side and a second vertical post 160B having a first side and a second side. See p. 6, line 20, to p. 7, line 2; p. 16, lines 19-21. The second vertical post 160B is coupled to the first post 160A via a base 810. See p. 7, lines 6-7. A first coupling member 10 is coupled at a lateral end 40 to, and independently extending substantially horizontally outward from, the first post 160A, and replicates at least one post 830, 840, 850, or 860 in a four-post equipment rack 820. See p. 5, lines 15-17; p. 16, lines 21-22; p. 17, lines 3-4; p. 18, lines 6-7; p. 18, line 15. A second coupling member 10 coupled at a lateral end 40 to, and independently extending substantially horizontally outward from, the second post

160A, and replicates at least one post 830, 840, 850, or 860 in the four-post equipment rack 820. See p. 5, lines 15-17; p. 17, lines 1-4; p. 18, lines 7-9; p. 18, line 15.

Independent claim 46 is directed to a method for converting a two-post equipment rack 200, 801 to support four-post loads. See p. 5, lines 15-17. The method includes coupling independent four-post replicating mounting points on the two-post equipment rack 200, 801. See p. 16, line 21, to p. 17, line 4; p. 17, lines 20-22; p. 18, lines 6-9. The mounting points include two or more independent coupling members 10. The four-post replicating mounting points are adapted to support the four-post loads, see p. 17, lines 7-8, and each coupling member 10 is adapted to vertically support the four-post loads at a first lateral end 30 and to attach to only one respective post at a second lateral end 40. See p. 9, line 22, to p. 10, line 3; p. 10, line 20, to p. 11, line 2.

Independent claim 51 is directed to a method for adapting a two-post equipment rack 200, 801 to support four-post loads. See p. 5, lines 15-17. A first coupling member 10C is coupled to a first post 160A. See p. 16, lines 21-22; p. 18, lines 6-7. A second coupling member 10E is coupled to a second post 160B. See p. 17, lines 1-3. The first coupling member 10C and the second coupling member 10E emulate two of the four posts in a four-post rack 820 with each emulated post defining a vertical supporting point for a load and the two-post equipment rack 200, 801 provides the remaining two posts in the four-post rack. See p. 17, lines 20-22.

Independent claim 52 is directed to a method for adapting a two-post equipment rack 200, 801 to support four-post loads. See p. 5, lines 15-17. A first coupling member 10C is coupled to a first post 160A. See p. 16, lines 21-22; p. 18, lines 6-7. A second coupling member 10E is coupled to a second post 160B. See p. 17, lines 1-3. A third coupling member 10D is coupled to the first post 160A substantially planar to and substantially parallel to the first coupling member 10C. See p. 16, line 22, to p. 17, line 1. A fourth coupling member 10F is coupled to the second post 160B substantially planar to and substantially parallel to the third coupling member. See p. 17, lines 1-3. Each of the coupling members 10 emulate one respective post in a four-post rack 820, with each emulated post defining a supporting point for a load. See p. 17, lines 3-8.

Independent claim 67 is directed to an equipment support device 10 for two-post rack systems. See p. 5, lines 11-18. The equipment support device 10 includes a rack attachment

means and an equipment attachment means coupled to the rack attachment means. See p. 9, lines 22-23; p. 10, lines 20-22. The equipment support device 10 also includes coupling feature 90 for connecting the support device 10 to adjacent equipment support devices 10. See p. 8, lines 1-9. The rack attachment means and the equipment attachment means are in means plus function format pursuant to 35 U.S.C. § 112, sixth paragraph. The equipment attachment flange 110, 110A, 110E (see, e.g., p. 9, line 22) corresponds to the equipment attachment means. The rack attachment flange 130, 130A (see, e.g., p. 10, lines 20-22) corresponds to the rack attachment means.

Independent claim 68 is directed to a method for racking a device having a four-post rack-mounting configuration to a two-post rack system 200, 801. See p. 16, lines 17-19. The method involves installing a two-post to four-post adapter 10 on the two-post rack system. See p. 19, lines 18-19. The two-post to four-post adapter is operable to support a device having a four-post rack-mounting configuration. See p. 16, lines 17-22; p. 17, lines 20-22. The four-post rack-mounting configuration is a configuration for mounting a device on a four-post rack, and the device is supported solely by the posts in the four-post rack. See p. 5, lines 11-18; p. 6, lines 3-9; p. 7, lines 11-22. The device is mounted to the two-post to four-post adapter 10. See p. 19, lines 19-20.

Independent claim 72 is directed to a system for racking a device having a four-post rack-mounting configuration to a two-post rack system 200, 801. See p. 16, lines 17-19. The system includes means for installing a two-post to four-post adapter 10 on the two-post rack system. See p. 19, lines 18-19. The two-post to four-post adapter is operable to support a device having a four-post rack-mounting configuration. See p. 16, lines 17-22; p. 17, lines 20-22. The four-post rack-mounting configuration is a configuration for mounting a device on a four-post rack, and the device is supported solely by the posts in the four-post rack. See p. 5, lines 11-18; p. 6, lines 3-9; p. 7, lines 11-22. The system also includes means for mounting the device to the two-post to four-post adapter. See p. 19, lines 19-20. The means for installing and the means for mounting are in means plus function format pursuant to 35 U.S.C. § 112, sixth paragraph. The equipment attachment flange 110, 110A, 110E (see, e.g., p. 9, line 22) and the orifices 120 correspond to the means for mounting. The rack attachment flange 130, 130A (see, e.g., p. 10, lines 20-22) and rack attachment points 140 correspond to the means for installing.

(6) Grounds of Rejection to Be Reviewed on Appeal

- I. Claims 1-12, 16-18, 23-27, 30-36, 38-40, 44-46, 48-58, and 67-72 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jensen et al. (U.S. Patent No. 6,220,456).
- II. Claim 2 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

(7) Argument

- I. The Jensen et al. Reference Fails to Teach or Suggest the Claimed Invention.
 - A. Claim 1 and its dependent claims are patentable over the Jensen et al. reference.

The rejection states:

As to claim 1, Jensen et al. disclose a coupling member capable of converting a two-post equipment rack, comprising:
a vertical support member 20 having a first lateral end, a second lateral end, a first longitudinal end, and a second longitudinal end;
an equipment attachment means 30 coupled to the first lateral end, the equipment attachment means defining a vertical supporting point for a load (the hole in vertical flange 30), the equipment attachment means being further adapted to secure to a load (via the hole in flange 30); and
means 22 for securing the coupling member to the two-post equipment rack
(Figures 1-3).

The Jensen et al. reference discloses a rack system having two posts. Support rails are mounted to the two posts for supporting computer equipment that is specially adapted for use with the support rails. See col. 3, lines 10-17. Each support rail includes a slot for accepting bolts that protrude from each side of a computer component chassis. The rails thereby provide vertical support for the chassis. See col. 3, lines 31-45.

Claim 1 recites, among other things, an equipment attachment means coupled to a first lateral end of a vertical support member. The equipment attachment means defines a vertical supporting point for a load. The vertical support member of the present application enables two-post rack systems to emulate four-post rack systems. Among other things, this enables much less expensive two-post rack systems to be converted for use in connection with four-post rack-mounted equipment loads. The Jensen et al. reference does not enable the convenience of such a

conversion. Instead, the Jensen et al. reference requires a specially designed computer component chassis 12 that includes protuberances 104 on the outer faces 100, 102 of the chassis 12.

The Jensen et al. reference does not disclose or suggest all of the limitations of claim 1. For example, the Jensen et al. reference does not disclose a vertical support member that has, coupled to a first lateral end of the vertical support member, an equipment attachment means that defines a vertical supporting point for a load. In the Jensen et al. reference, the slots provide vertical support for the computer component. See col. 3, lines 41-44; col. 4, lines 33-49. The slots are located along the length of a middle portion of the support rails. See Figs. 2-3. Thus, contrary to the assertions made in the Office Action, the support rails do not include an equipment attachment means coupled to a first lateral end of the support rail and defining a vertical supporting point for a load.

Although the Examiner asserts that the flange 30 of Jensen et al. defines a supporting point for a load via the hole in the flange 30, the Jensen reference does not disclose or suggest that the hole in the flange provides a supporting point. Instead, the reference specifically states that vertical support is provided by the slots 26 in the support rails 20, which engage bolts 104 on the side of the chassis 12. The flange 30 merely serves to guide the chassis into the gap between rails attached to opposite posts. See col. 3, lines 63-64. The reference does not describe the purpose of the hole in the flange 30, but, based on the drawings and the description of the slots 26 in the support rails as providing vertical support, the hole in the flange 30 is clearly for purposes of preventing horizontal movement of the chassis 12 relative to the rails 20. See col. 3, lines 44-45. There is no teaching or suggestion of an equipment attachment means coupled to a first lateral end and defining a vertical supporting point for a load. Accordingly, the Jensen et al. reference does not teach or suggest the invention defined by claim 1 or by any of its dependent claims.

B. Claim 2 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 2, Jensen et al. disclose a coupling member wherein a supporting point emulates a vertical upright in a four-post equipment rack having a hole pattern (Figure 2).

Claim 2 is dependent upon claim 1 and further recites that the supporting point emulates a vertical upright in a four-post equipment rack having a hole pattern that complies with EIA-310 standards, revision D. The EIA-310 standards, revision D, define a particular spacing of holes. The Jensen et al. reference does not teach or suggest a supporting point that emulates a vertical upright in a four-post equipment rack having a hole pattern that complies with EIA-310 standards, revision D. The slot that provides support in the system described by the Jensen et al. reference does not include a hole pattern that complies with the EIA-310 standards, revision D. Furthermore, there is no reason to use the hole pattern of EIA-310, revision D, in connection with the system described by Jensen et al. because the described system is not intended to emulate a vertical upright in a four-post equipment rack. Instead, the system described in Jensen et al. is intended to provide support for equipment using slots that mate with protuberances on the outer faces of the equipment chassis. Accordingly, claim 2 is neither taught nor suggested by the Jensen et al. reference.

C. Claim 4 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 4, Jensen et al. disclose a coupling member wherein a load 104 comprises a sliding assembly (bolts 104 are slid onto the coupling member) adapted to secure an additional load 12 thereto, the sliding assembly attached to the equipment attachment means 30 (via rail 20) and providing slidable support for the additional load with respect to the vertical support member (Figure 2).

Claim 4 recites that the load comprises a sliding assembly adapted to secure an additional load thereto, the sliding assembly attached to the equipment attachment means and providing slidable support for the additional load with respect to the vertical support member. Jensen et al. does not teach or suggest a load comprising a sliding assembly adapted to secure an additional load thereto. In addition, the reference also fails to teach or suggest a sliding assembly attached to the equipment attachment means and providing slidable support for the additional load with respect to the vertical support member. The support rail described in the Jensen et al. reference allows horizontal movement of the computer component chassis for purposes of installing the chassis 12 into the rack 10. See col. 3, lines 31-45.

The disclosed support rail, however, does not constitute a sliding assembly. As defined in the claim, an equipment attachment means is coupled to a first lateral end of a vertical support member. The equipment attachment means defines a supporting point for a load that comprises a sliding assembly. The sliding assembly is adapted to secure an additional load. Thus, the sliding assembly is separate from the vertical support member and separate from an additional load that can be secured to the sliding assembly. The Jensen et al. reference fails to teach or suggest a sliding assembly that is separate from a vertical support member and from an additional load. Accordingly, the Jensen et al. reference fails to teach or suggest the limitations of claim 4.

In responding to the Appellant's previous arguments, the Examiner asserts that:

Jensen et al. disclose a coupling member wherein a load 104 comprises a sliding assembly (bolts 104 are slid onto the coupling member) adapted to secure an additional load 12 thereto, the sliding assembly attached to the equipment attachment means 30 (via rail 20) and providing slidable support for the additional load with respect to the vertical support member (Figure 2).

These assertions, however, are inconsistent with the Examiner's construction of claim 1. In rejecting claim 1, the Examiner asserts that the hole in vertical flange 30 is an equipment attachment means defining a vertical supporting point for a load. Accordingly, the Examiner takes the position that the computer component chassis 12 is the load. In claim 4, which depends from claim 1, the Examiner takes the entirely inconsistent position that the load in the Jensen et al. reference is the bolts 104 and that the separate, additional load in the reference is the chassis 12. Thus, the Examiner identifies the load inconsistently in the two claims. Because the load recited in claim 4 relies for antecedent basis on the load recited in claim 1, the claims cannot be construed to permit such an inconsistency. Accordingly, the reference does not remotely disclose or suggest the limitations of claim 4.

D. Claim 5 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 5, Jensen et al. disclose a coupling member wherein a load comprises a cable management arm (inherently, cables are attached to load 12; Figure 6).

Claim 5 recites that the load comprises a cable management arm. Even if cables are inherently attached to the computer component chassis 12, cables do not constitute a cable management arm. In addition, the Jensen et al. reference fails to teach or suggest a load comprising a cable management arm. Accordingly, claim 5 is neither taught nor suggested by the Jensen et al. reference.

E. Claims 7, 8, 34, and 50 are patentable over the Jensen et al. reference.

The rejection states:

As to claim 7, Jensen et al. disclose a coupling member comprising a first torsion member 30 coupled to a vertical support member 20 at a first longitudinal end (Figure 3).

As to claim 8, Jensen et al. disclose a coupling member comprising a second torsion member 22 coupled to a vertical support member 20 at a second longitudinal end (Figure 3).

...

As to claim 34, Jensen et al. disclose a modified two-post rack wherein a first coupling member comprises:

a first torsion member 30 coupled to a vertical support member 20 at the first longitudinal end; and

a second torsion member 22 coupled to the vertical support member at the second longitudinal end (Figure 3).

...

As to claim 50, Jensen et al. disclose a method wherein one of four-post replicating mounting points further comprise:

a first torsion member 30 coupled to a vertical support member 20 at the first longitudinal end; and

a second torsion member 22 coupled to the vertical support member at the second longitudinal end (Figure 3).

Claim 7 recites that the coupling member of claim 1 includes a first torsion member coupled to the vertical support member at the first longitudinal end. Claim 8 recites that the coupling member of claim 7 includes a second torsion member coupled to the vertical support member at the second longitudinal end. In rejecting claim 1, the Examiner asserts that the flange 30 described in the reference is an equipment attachment means coupled to a first lateral end of a vertical support member. In rejecting claim 7, the Examiner asserts that the flange 30 is a first torsion member coupled to the vertical support member at a first longitudinal end. Clearly, the first lateral end and the first longitudinal end of the vertical support member are not the same. The described flange 30 is not coupled both to a first lateral end and a first longitudinal end. In

addition, neither the flange 30 or the triangular weldment bracket 22 are coupled to a longitudinal end of the support rails 20. Accordingly, claims 7 and 8 are neither taught nor suggested by the Jensen et al. reference. Claims 34 and 50 includes similar limitations and are also not taught or suggested by the Jensen et al. reference.

F. Claim 9 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 9, Jensen et al. disclose a coupling member wherein means 22 for securing the coupling member to the two-post rack comprises a rack attachment flange 22 coupled to a second lateral end of the vertical support member (a second lateral end is defined by flange 22; Figure 3).

Claim 9 recites that the means for securing the coupling member to the two-post rack comprises a rack attachment flange coupled to the second lateral end of the vertical support member. The Jensen et al. reference does not disclose a rack attachment flange coupled to a second lateral end of a vertical support member. The disclosed support rail is attached to the rack using a bracket 22 connected near the middle of the support rail, and not using a flange coupled to a lateral end of the support rail. See Fig. 3.

The Examiner asserts that the bracket 22 defines a second lateral end. However, the bracket is located near the middle of the support rail 20. The middle of the support rail is not the same as an end of the support rail. An "end" is defined as "the part of an area that lies at the boundary;" "a point that marks the extent of something;" or "the extreme or last part lengthwise." Merriam-Webster's Collegiate Dictionary (10th ed. 1996). Therefore, the reference does not teach or suggest the limitations of claim 9 or its dependent claims.

G. Claim 15 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 15, Jensen et al. disclose a coupling member wherein the coupling feature 30,22 (individual surfaces of flanges 30,22) is adapted to secure to (via friction) other coupling members adjacent thereto (Figure 1).

Claim 15 recites that a coupling feature is adapted to secure to other coupling members adjacent thereto. The Jensen et al. reference includes absolutely no teaching or suggestion of a coupling feature adapted to secure to other coupling members adjacent thereto. Among other things, there is no disclosure or suggestion that the individual surfaces of flanges 30 and

triangular weldment brackets 22 are secured via friction to other coupling members.

Accordingly, claim 15 is neither taught nor suggested by the Jensen et al. reference.

H. Claim 27 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 27, Jensen et al. disclose a coupling member wherein an opening 28 is adapted to provide ventilation (Figure 2).

Claim 27, in combination with claim 26, from which it depends, recites that the vertical support member is provided with one or more openings adapted to provide ventilation. Although the Examiner asserts that widened portion 28 of slot 26 in the Jensen et al. reference constitutes an opening adapted to provide ventilation, there is no disclosure or suggestion that the opening is adapted to provide ventilation. Furthermore, the widened portion 28 of slot 26 is simply incapable of providing ventilation. Instead, the reference discloses that the widened portion 28 allows a head of a bolt 104 to enter the slot. Accordingly, claim 27 is neither taught nor suggested by the Jensen et al. reference.

I. Claim 28 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 28, Jensen et al. disclose a coupling member wherein the openings 28 provide tie-points cable of securement of cables thereto (via securement of device 12 within the openings; Figure 2).

Claim 28, in combination with claim 26, from which it depends, recites that the vertical support member is provided with one or more openings that provide tie-points for securement of cables thereto. Although the Examiner asserts that widened portion 28 of slot 26 in the Jensen et al. reference constitutes an opening that provides tie-points for securement of cables via securement of device 12 within the openings, there is no disclosure or suggestion that the openings provide tie-points for securement of cables thereto. Furthermore, the widened portion 28 of slot 26 is incapable of providing tie-points. Accordingly, claim 28 is neither taught nor suggested by the Jensen et al. reference.

J. Claim 31 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 31, Jensen et al. disclose a modified two-post rack, comprising: a first vertical post 16 having a first side and a second side;

a second vertical post 16 having a first side and a second side, said second vertical post being coupled to the first post via a base 14;

a first coupling member 20 coupled at a lateral end to (a second lateral end is defined by flange 22), and independently extending substantially horizontally outward from, the first post, the first coupling member replicating a post in a four-post equipment rack; and

a second coupling member 20 coupled at a lateral end to (a second lateral end is defined by flange 22), and independently extending substantially horizontally outward from, the second post, the second coupling member replicating a post in the four-post equipment rack (Figures 1-3).

Independent claim 31 recites a first coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, a first post and a second coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, a second post. The first coupling member replicates at least one post in a four-post equipment rack, and the second coupling member replicates at least one post in the four-post equipment rack. As discussed above in connection with claim 9, the Jensen et al. reference fails to teach or suggest coupling members that are coupled at a lateral end to a first or a second post in a two-post rack. Accordingly, claim 31 and its dependent claims are neither taught nor suggested by the Jensen et al. reference.

K. Claim 32 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 32, Jensen et al. disclose a modified two-post rack comprising:
a third coupling member 20 coupled to and independently extending substantially horizontally outward from a first post; and

a fourth coupling member 20 coupled to and independently extending substantially horizontally outward from a second post, first, second, third and fourth coupling members each substantially replicating a different vertical upright A,B,C,D (Figure 1 reprinted with annotations below) in a four-post equipment rack (Figure 1).

Claim 32 depends from claim 31 and further recites a third coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, the first post and a fourth coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, the second post. Each of the first, second, third, and fourth coupling members substantially replicates a different vertical upright in a four-post

equipment rack. Although the Examiner asserts that the back end of the support rails 20 replicate a vertical upright in a four-post equipment rack, there is no disclosure or suggestion that the end of the support rails 20 can replicate a vertical upright in a four-post equipment rack. For example, the back end of the support rails do not serve as a support point for, or include any feature for attaching to, a load. Accordingly, claim 32 and its dependent claims are neither taught nor suggested by the Jensen et al. reference.

L. Claim 46 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 46, Jensen et al. disclose a method for converting a two-post equipment rack to support four-post loads, comprising:

coupling independent four-post replicating mounting points on the two-post equipment rack, wherein the mounting points comprise two independent coupling members 20, the four-post replicating mounting points being adapted to support the four-post loads and each coupling member adapted to vertically support (via the hole in vertical flange 30) the four-post loads at a first lateral end and to attach to only one respective post at a second lateral end (a second lateral end is defined by flange 22; Figures 1-3).

Independent claim 46 recites a method that includes coupling independent four-post replicating mounting points on a two-post equipment rack. The mounting points comprise two or more independent coupling members that are each adapted to support four-post loads at a first lateral end and to attach to only one respective post at a second lateral end. The Jensen et al. reference does not teach coupling members that are adapted to support four-post loads at a first lateral end and to attach to a post at a second lateral end. Similar to the discussion with respect to claim 1, the support rail described in the reference is adapted to support a load using a slot that is located substantially along a length of the support rail but not at a lateral end. Furthermore, as discussed with respect to claim 9, the support rail attaches to a post using a bracket near the middle of the support rail rather than at an end. Thus, the Jensen et al. reference does not teach or suggest the invention defined by claim 46 or any of its dependent claims.

M. Claim 51 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 51, Jensen et al. disclose a method for adapting a two-post equipment rack to support four-post loads, comprising:

coupling a first coupling member 20 to a first post 16; and coupling a second coupling member 20 to a second post 16, wherein the first coupling member and the second coupling member emulate two of the four posts in a four-post rack with each emulated post defining a vertical supporting point for a load (the hole in vertical flange 30); and
wherein the two-post equipment rack provides the remaining two posts in the four-post rack (Figures 1-3).

Independent claim 51 recites a first coupling member and a second coupling member that emulate two of the four posts in a four-post rack with each emulated post defining a vertical supporting point for a load. As described in the specification, a four-post rack provides four vertical uprights, or posts, used for attaching equipment. The Jensen et al. reference does not teach or suggest coupling members that emulate posts in a four-post rack, with each emulated post defining a vertical supporting point for a load. Among other things, the hole in the flange 30 does not define a vertical supporting point for a load. Furthermore, the support rails in the Jensen et al. reference do not emulate posts in a four-post rack. Thus, claim 51 and its dependent claims are not anticipated by or obvious in view of the Jensen et al. reference.

N. Claim 52 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 52, Jensen et al. disclose a method for adapting a two-post equipment rack to support four-post loads, comprising:
coupling a first coupling member 20 to a first post 16;
coupling a second coupling member 20 to a second post 16;
coupling a third coupling member 20 to a first post 16 substantially planar to (the first and third coupling members lie within the same plane) and substantially parallel to a first coupling member 20;
coupling a fourth coupling member 20 to a second post 16 substantially planar to (the second and fourth coupling members lie within the same plane) and substantially parallel to the second coupling member; and
wherein each of the coupling members emulate one respective post A,B,C,D in a four-post rack, with each emulate post defining a supporting point for a load (via the hole in flange 30; Figure 1).

Independent claim 52 recites coupling a third coupling member to the first post substantially planar to and substantially parallel to the first coupling member and coupling a fourth coupling member to the second post substantially planar to and substantially parallel to the second coupling member. The Jensen et al. reference does not teach or suggest a third coupling

member that is substantially planar to a first coupling member or a fourth coupling member that is substantially planar to a second coupling member. Furthermore, the reference does not teach coupling members that emulate posts in a four-post rack. Therefore, claim 52 and its dependent claims are not anticipated by or obvious in view of the Jensen et al. reference.

O. Claim 67 is patentable over the Jensen et al. reference.

The rejection states:

As to claim 67, Jensen et al. disclose an equipment support device for two-post rack systems, comprising:

rack attachment means 22;

an equipment attachment means 30 coupled to the rack attachment means;

and

a coupling feature (surface of rack attachment means 22) for connecting the support device to adjacent equipment support devices (adjacent support devices 20 rest upon each other; thus adjacent support devices are connected to one another; Figure 1).

Independent claim 67 recites an equipment support device that includes a rack attachment means, an equipment attachment means coupled to the rack attachment means, and a coupling feature for connecting the support device to adjacent equipment support devices. The Examiner asserts that adjacent support devices 20 rest upon each other and are therefore connected to one another. Although the Jensen et al. reference does not explicitly state that the adjacent support rails 20 rest upon each other, Figure 1 suggests that they might. However, simply being in contact with one another does not teach or suggest a coupling feature for connecting one support device to an adjacent support device. The Appellant respectfully traverses the Examiner's contention that support rails resting upon each other equates to being connected to one another. Accordingly, claim 67 is not taught or suggested by the Jensen et al. reference.

P. Claim 68 and 72 are patentable over the Jensen et al. reference.

The rejection states:

As to claim 68, Jensen et al. disclose a method for racking a device having a four-post rack-mounting configuration to a two-post rack system, the method comprising:

installing a two-post to four-post adapter 20 on the two-post rack system, the two post to four-post adapter operable to support a device having a four-post rack-mounting configuration, the four-post rack-mounting configuration being a configuration for mounting a device on a four-post rack, wherein the device is

(capable of being) supported solely by the posts in the four-post rack (via bolts 104); and

mounting the device to the two-post to four-post adapter (Figures 1-3).

...

As to claim 72, Jensen et al. disclose a system for racking a device having a four-post rack-mounting configuration to a two-post rack system, the system comprising:

means 22 for installing a two-post to four-post adapter 20 on the two-post rack system, the two-post to four-post adapter operable to support a device 12 having a four-post rack mounting configuration, the four-post rack-mounting configuration being a configuration for mounting a device on a four-post rack, wherein the device is (capable of being) supported solely by the posts in the four-post rack (via bolts 104); and

means 30 for mounting the device to the two-post to four-post adapter (Figures 1 -3).

Independent claims 68 and 72 recite a two-post to four-post adapter operable to support a device having a four-post rack-mounting configuration and mounting the device to the two-post to four-post adapter. The four-post rack-mounting configuration is a configuration for mounting a device on a four-post rack, wherein the device is supported solely by the posts in the four-post rack. The Jensen et al. reference does not disclose or suggest a four-post rack-mounting configuration. The computer component chassis 12 that is supported in the disclosed system does not have a four-post rack-mounting configuration nor is the support rail operable to support a device having a four-post rack-mounting configuration. Instead, the support rail 20 serves to support the computer component chassis using stand-off bolts 104 that engage the support rails. Thus, the Jensen et al. reference does not disclose or suggest the limitations of claims 68 and 72 and their respective dependent claims.

II. Claim 2 Does Not Lack Definiteness.

In the Office Action, the Examiner rejected claim 2 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and claim the subject matter which applicant regards as the invention. In particular, the Examiner states that it "is unclear as to what is positively claimed, as it is unclear as to what EIA-310, revision D, standards values are, and as standards frequently change." With respect to the assertion that it is unclear what EIA-310 standards values are, persons of ordinary skill in the art know or can easily determine what the EIA-310 standards are. The EIA-310 standards have been used in the art for decades

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and are well known to persons of ordinary skill in the art. Furthermore, EIA-310 standards, revision D, do not change. If the standards do change, a new revision letter is issued. Accordingly, claim 2 does not lack definiteness.

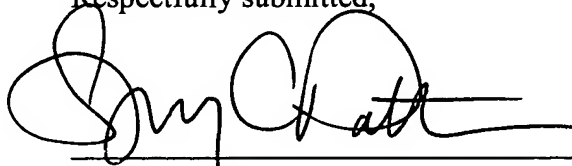
CONCLUSION

In view of the foregoing, the Examiner's rejection should be reversed. Should the Board be of the opinion that a claim on appeal may be amended to overcome a specific rejection, the Board is respectfully requested to include in the opinion such a statement and afford appellant the right to amend in conformity therewith.

The brief fee of \$250 is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Date: 6/28/05

Respectfully submitted,



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Appendix of Claims

1. A coupling member for converting a two-post equipment rack, comprising:
 - a vertical support member having a first lateral end, a second lateral end, a first longitudinal end, and a second longitudinal end;
 - an equipment attachment means coupled to the first lateral end, said equipment attachment means defining a vertical supporting point for a load, said equipment attachment means being further adapted to secure to a load; and
 - means for securing the coupling member to the two-post equipment rack.
2. The coupling member of claim 1, wherein said supporting point emulates a vertical upright in a four-post equipment rack having a hole pattern that complies with EIA-310, revision D, standards.
3. The coupling member of claim 1, wherein said equipment attachment means is a flange.
4. The coupling member of claim 1, wherein said load comprises a sliding assembly adapted to secure an additional load thereto, the sliding assembly attached to the equipment attachment means and providing slidable support for the additional load with respect to the vertical support member.
5. The coupling member of claim 1, wherein said load comprises a cable management arm.
6. The coupling member of claim 1, wherein said load comprises electronic equipment.
7. The coupling member of claim 1, further comprising:
 - a first torsion member coupled to said vertical support member at said first longitudinal end.

8. The coupling member of claim 7, further comprising:
a second torsion member coupled to said vertical support member at said second longitudinal end.

9. The coupling member of claim 1, wherein said means for securing the coupling member to the two-post rack comprises a rack attachment flange coupled to the second lateral end of the vertical support member.

10. The coupling member of claim 1, wherein the coupling member is adapted to be mounted adjacent to other coupling members and to be supported by adjacent coupling members.

11. The coupling member of claim 1, further comprising:
at least one coupling feature.

12. The coupling member of claim 11, wherein said at least one coupling feature is attached to said first torsion member and on said second torsion member.

15. The coupling member of claim 11, wherein said coupling feature is adapted to secure to other coupling members adjacent thereto.

16. The coupling member of claim 9, wherein said rack attachment flange is adapted to provide a load transfer path from said vertical support member to the two-post equipment rack.

17. The coupling member of claim 9, wherein said rack-attachment flange is in a pre-loading configuration.

18. The coupling member of claim 17, wherein the pre-loading configuration is provided by said rack attachment flange being secured to said vertical support member at an acute angle.

20. The coupling member of claim 7, further including an outwardly extending portion on said first torsion member, wherein said first torsion member further includes a lower flange end on said outwardly extending portion adapted to provide a pivot point for load support.

21. The coupling member of claim 8, further including an outwardly extending portion on said second torsion member, wherein said second torsion member further includes a lower flange end on said outwardly extending portion adapted to provide a pivot point for load support.

22. The coupling member of claim 8, wherein said first and second torsion members have terminating portions formed at an obtuse angle relative to said vertical support member.

23. The coupling member of claim 7, wherein said first torsion member is substantially perpendicularly coupled to said vertical support member at the first longitudinal end.

24. The coupling member of claim 8, wherein said second torsion member is substantially perpendicularly coupled to said vertical support member at the second longitudinal end.

25. The coupling member of claim 1, wherein the coupling member is formed in increments of one modular unit ("U") in height.

26. The coupling member of claim 1, wherein said vertical support member is provided with one or more openings thereon.

27. The coupling member of claim 26, wherein said openings are adapted to provide ventilation.

28. The coupling member of claim 26, wherein said openings provide tie-points for securement of cables thereto.

29. The coupling member of claim 7, wherein said first torsion member terminates at a point prior to said equipment attachment means, forming a gap therein.

30. The coupling member of claim 8, wherein said second torsion member terminates at a point prior to said equipment attachment means, forming a gap therein.

31. A modified two-post rack, comprising:

a first vertical post having a first side and a second side;

a second vertical post having a first side and a second side, said second vertical post being coupled to said first post via a base;

a first coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, said first post, said first coupling member replicating at least one post in a four-post equipment rack; and

a second coupling member coupled at a lateral end to, and independently extending substantially horizontally outward from, said second post, said second coupling member replicating at least one post in the four-post equipment rack.

32. The modified two-post rack of claim 31, further comprising:

a third coupling member coupled to and independently extending substantially horizontally outward from said first post; and

a fourth coupling member coupled to and independently extending substantially horizontally outward from said second post, said first, second, third and fourth coupling members each substantially replicating a different vertical upright in a four-post equipment rack.

33. The modified two-post equipment rack of claim 32, wherein said first coupling member comprises:

a vertical support member having a first lateral end, a second lateral end, a first longitudinal end, and a second longitudinal end;

an equipment attachment flange coupled to the first lateral end, said equipment attachment flange being adapted to emulate a vertical upright in a four-post equipment rack, said equipment attachment flange being further adapted to secure to a load; and
a rack attachment flange coupled to the second lateral end of said vertical support member.

34. The modified two-post rack of claim 33, wherein said first coupling member further comprises:

a first torsion member coupled to said vertical support member at the first longitudinal end; and

a second torsion member coupled to said vertical support member at the second longitudinal end.

35. The modified two-post equipment rack of claim 34, wherein said first coupling member further comprises at least one coupling feature on said first torsion member and on said second torsion member.

36. The modified two-post equipment rack of claim 34, wherein said first coupling member is adapted to be supported by adjacent vertical coupling members.

37. The modified two-post equipment rack of claim 35, wherein the coupling feature is adapted to secure to coupling members adjacent thereto.

38. The modified two-post equipment rack of claim 33, further comprising said rack attachment flange being adapted to provide a load transfer path from said vertical support member to the two-post equipment rack.

39. The modified two-post equipment rack of claim 33, further comprising said rack-attachment flange being in a pre-loading configuration.

40. The modified two-post equipment rack of claim 39, wherein said pre-loading configuration comprises said rack attachment flange being secured to said vertical support member at an acute angle.

42. The modified two-post equipment rack of claim 34, further comprising said first torsion member having a lower flange end adapted to provide a pivot point for load support.

43. The modified two-post equipment rack of claim 34, further comprising said second torsion member having a lower flange end adapted to provide a pivot point for load support.

44. The modified two-post equipment rack of claim 34, further comprising said first torsion member substantially perpendicularly coupled to said vertical support member at said first longitudinal end.

45. The modified two-post equipment rack of claim 34, further comprising said second torsion member substantially perpendicularly coupled to said vertical support member at said second longitudinal end.

46. A method for converting a two-post equipment rack to support four-post loads, comprising:

coupling independent four-post replicating mounting points on the two-post equipment rack, wherein said mounting points comprise two or more independent coupling members, said four-post replicating mounting points being adapted to support the four-post loads and each coupling member adapted to vertically support the four-post loads at a first lateral end and to attach to only one respective post at a second lateral end.

48. The method of claim 46, wherein said four-post replicating mounting points comprise four coupling members.

49. The method of claim 46, wherein one of said four-post replicating mounting points comprise:

- a vertical support member having a first lateral end, a second lateral end, a first longitudinal end, and a second longitudinal end;

- an equipment attachment flange coupled to the first lateral end, said equipment attachment flange being adapted to emulate a vertical upright in a four-post equipment rack, said equipment attachment flange being farther adapted to secure to a load; and

- a rack attachment flange coupled to the second lateral end of said vertical support member.

50. The method of claim 49, wherein one of said four-post replicating mounting points further comprise:

- a first torsion member coupled to said vertical support member at the first longitudinal end; and

- a second torsion member coupled to said vertical support member at the second longitudinal end.

51. A method for adapting a two-post equipment rack to support four-post loads, comprising:

- coupling a first coupling member to a first post;

- coupling a second coupling member to a second post, wherein said first coupling member and said second coupling member emulate two of the four posts in a four-post rack with each emulated post defining a vertical supporting point for a load; and

- wherein the two-post equipment rack provides the remaining two posts in the four-post rack.

52. A method for adapting a two-post equipment rack to support four-post loads, comprising:

- coupling a first coupling member to a first post;

- coupling a second coupling member to a second post;

coupling a third coupling member to [[a]]said first post substantially planar to and substantially parallel to said first coupling member;

coupling a fourth coupling member to said second post substantially planar to and substantially parallel to said third coupling member; and

wherein each of the coupling members emulate one respective post in a four-post rack, with each emulated post defining a supporting point for a load.

53. The method of claim 52, where said first coupling member comprises:

a vertical support member having a first lateral end, a second lateral end, a first longitudinal end, and a second longitudinal end;

an equipment attachment flange coupled to the first lateral end, said equipment attachment flange being adapted to emulate a vertical upright in a four-post equipment rack, said equipment attachment flange being further adapted to secure to a load; and

a rack attachment flange coupled to the second lateral end of said vertical support member.

54. The method of claim 53, wherein said first coupling member further comprises:

a first torsion member coupled to said vertical support member at the first longitudinal end; and

a second torsion member coupled to said vertical support member at the second longitudinal end.

55. The method of claim 51, further comprising securing a load to the vertical support member of said first and said second coupling member.

56. The method of claim 52, further comprising securing a load to the vertical support member of said first, said second, said third and said fourth coupling member.

57. The method of claim 53, wherein said load comprises a slide assembly.

58. The method of claim 52, further comprising:

securing a fifth coupling member to said first post; and
securing a sixth coupling member to said second post.

59. The method of claim 58, further comprising:

coupling said first coupling member to said fifth coupling member.

67. An equipment support device for two-post rack systems, comprising:

rack attachment means;
an equipment attachment means coupled to said rack attachment means; and
a coupling feature for connecting the support device to adjacent equipment
support devices.

68. A method for racking a device having a four-post rack-mounting configuration to a two-post rack system, said method comprising:

installing a two-post to four-post adapter on the two-post rack system, the two-post to four-post adapter operable to support a device having a four-post rack-mounting configuration, the four-post rack-mounting configuration being a configuration for mounting a device on a four-post rack, wherein the device is supported solely by the posts in the four-post rack; and

mounting the device to the two-post to four-post adapter.

69. The method according to claim 68, wherein said installing includes coupling the two-post to four-post adapter to the two-post rack system.

70. The method according to claim 69, wherein the coupling includes bolting the two-post to four-post adapter to the two-post rack system.

71. The method according to claim 68, wherein the two-post to four-post adapter includes at least two coupling members.

72. A system for racking a device having a four-post rack-mounting configuration to a two-post rack system, said system comprising:

means for installing a two-post to four-post adapter on the two-post rack system, the two-post to four-post adapter operable to support a device having a four-post rack-mounting configuration, the four-post rack-mounting configuration being a configuration for mounting a device on a four-post rack, wherein the device is supported solely by the posts in the four-post rack; and

means for mounting the device to the two-post to four-post adapter.